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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/523,592	02/04/2005	Johannes Markus Breitbach	1454.1592	5807

21171 7590 10/09/2007

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EXAMINER	
LAMARRE, GUY J	
ART UNIT	**PAPER NUMBER**
2112	
MAIL DATE	**DELIVERY MODE**
10/09/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/523,592	BREITBACH, JOHANNES MARKUS	
	Examiner	Art Unit	
	Guy J. Lamarre	2112	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02/04/2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *11-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *04 February 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *02/04/2005*.

4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

1. Pursuant to 35 USC 131, **Claims 11-20** are presented for examination.

Claim Rejections - 35 USC § 102

2. **Claims 1-18** are rejected under 35 U.S.C. 102(b) as being anticipated by '***A Reliability Output Viterbi Algorithm*** *with Applications to Hybrid ARQ*;' IEEE, May 1998 **to Raghavan et al.** -IDS of 02/04/2005-

As per Claims 11-20, Raghavan et al. discloses, e.g., in **col.** 2 page 1214 et seq., and Figs. 1-4, an equivalent data transfer protocol wherein algorithm comprising reliability information in conjunction with error detection coding allows for improved data transfer, such algorithm being based , e.g., on the Reliability Output Viterbi algorithm (ROVA). ROVA produces a reliability value -along with a threshold value- that is applied to ARQ logic for determining whether requests for retransmit are submitted from destination to data source .

As per Claim 11, **Raghavan et al.** discloses, e.g., in **col.** 2 page 1214 et seq., an equivalent method for the transmission of data, dividing a transmission-end input data stream into individual words; determining a-priori reliability values for positions of a transmittal data block based on transmission-end modulation methods and coding methods; allocating the words of the input data stream and transmitting in corresponding positions of the transmittal data block based on the a-priori reliability values; forming, at a receiving end, an a-posteriori reliability value for each word of the transmittal data block; and re-requesting received words having a minimum value falling below the a-posteriori reliability value, and re-transmitting from the transmission end.

As per Claim 12, , **Raghavan et al.** discloses, e.g., in **col.** 2 page 1214 et seq., an equivalent method according to claim 11, wherein a first word of the input data stream, allocated to a first position of the transmittal data block with a maximum a-priori reliability value, is transmitted first, and wherein an nth word of the input data stream, allocated to an nth position of

the transmittal data block with a minimum a-priori reliability value, is transmitted last.

As per Claim 13, **Raghavan et al.** discloses an equivalent method according to claim 12, wherein said forming at the receiving end includes determining an ith word at an ith position in the transmittal data block having an a-posteriori reliability value below the minimum value for the first time, and wherein said re-requesting includes transmitting the ith position of the ith word to the transmission end, e.g., in **col.** 2 page 1214 et seq.

As per Claim 14, **Raghavan et al.** discloses an equivalent method according to claim 13, wherein said re-transmitting includes forming at the transmission end a new transmittal data block in which the ith word of the transmittal data block transmitted previously is allocated to the first position for re-transmission and positions following the first position are occupied with following words of the transmittal data block transmitted previously that occupied positions greater than the ith position, e.g., in **col.** 2 page 1214 et seq.

As per Claim 15, **Raghavan et al.** discloses an equivalent method according to claim 14, wherein said re-requesting uses a return channel to transmit the ith position from the receiving end to the transmission end, e.g., in **col.** 2 page 1214 et seq.

As per Claim 16, **Raghavan et al.** discloses an equivalent method according to claim 15, further comprising: storing error words of a first transmission considered to be in error at the receiving end; and combining the error words with re-transmitted words of a second transmission by using one of a maximum ratio combining method and a code combining method, e.g., in **col.** 2 page 1214 et seq.

As per Claim 17, **Raghavan et al.** discloses an equivalent method according to claim 16, wherein said forming of the a-posteriori reliability values at the receiving end uses a soft output decoding method, e.g., in **col.** 2 page 1214 et seq.

As per Claim 18, **Raghavan et al.** discloses an equivalent method according to claim 17,

wherein said forming of the a-posteriori reliability values at the receiving end uses a trellis decoding method, e.g., in **col.** 2 page 1214 et seq.

As per Claim 19, Raghavan et al. discloses **an equivalent** method according to claim 18, wherein said transmitting of the transmittal data block is a modulated transmission using one of a PSK, a 16QAM and a higher-level modulation method, e.g., in **col.** 2 page 1214 et seq.

As per Claim 20, Raghavan et al. discloses **an equivalent** method according to claim 19, further comprising adding one of a checksum and a CRC data block as a prefix to the transmittal data block for error detection., e.g., in col. 2 page 1214 et seq.

CONCLUSION

* Any response to this action should be mailed to:

Commissioner of Patents and Trademarks, Washington, D.C. 20231

or faxed to: (571) 273-8300 for all formal communications.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Guy J. Lamarre, P.E., whose telephone number is (571) 272-3826. The examiner can normally be reached on Monday to Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jacques Louis-Jacques, can be reached at (571) 272-6962.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (571) 272-3609.

Information regarding the status of an application may also be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Guy J. Lamarre, P.E
Primary Examiner